## **EAST Search History**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5	cholate? and chromatography and GDH and protein	US-PGPUB; USPAT; DERWENT	OR	ON	2006/05/11 14:07
L2	5	cholate? and chromatography and GDH and GOD	US-PGPUB; USPAT; DERWENT	OR	ON	2006/05/11 14:11
L3	1	cholate? and purification and chromatography and GDH	US-PGPUB; USPAT; DERWENT	OR	ON	2006/05/11 14:11

5/11/2006 2:13:04 PM Page 1

Thank you in advance for your participation.

FILE 'HOME' ENTERED AT 14:15:48 ON 11 MAY 2006

=> file .mymstn

COST IN U.S. DOLLARS
SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST
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=> s cholate? and chromatography and protein and purification L1 946 CHOLATE? AND CHROMATOGRAPHY AND PROTEIN AND PURIFICATION

=> s ll and GDH

L2 1 L1 AND GDH

=> s cholate? and chromatography and ( GDH or GOD)
L3 1 CHOLATE? AND CHROMATOGRAPHY AND (GDH OR GOD)

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L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:220451 CAPLUS

DOCUMENT NUMBER: 140:267197

TITLE: Protein purification by hydrophobic chromatography and anion exchange

chromatography

INVENTOR(S): Yamaoka, Hideaki; Kurosaka, Keisuke; Kawase, Shido

PATENT ASSIGNEE(S): Arkray, Inc., Japan; Unitika Ltd.

SOURCE: PCT Int. Appl., 30 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

WO 2004022732 WO 2003-JP10540 A1 20040318 20030820 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG AU 2003-262258 AU 2003262258 A1 20040329 20030820 EP 2003-794088 20030820 20050601 EP 1535997 A1 AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK CN 2003-824734 20030820 CN 1751119 Α 20060322 A1 US 2005-526026 20050811 US 2006094098 20060504 PRIORITY APPLN. INFO.: JP 2002-253742 A 20020830 W 20030820 WO 2003-JP10540 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS 5 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

REFERENCE COUNT:

## => d ibib 12

ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN

2004:220451 CAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 140:267197

Protein purification by TITLE:

hydrophobic chromatography and anion

APPLICATION NO.

DATE

exchange chromatography

Yamaoka, Hideaki; Kurosaka, Keisuke; Kawase, Shido INVENTOR(S):

Arkray, Inc., Japan; Unitika Ltd. PATENT ASSIGNEE(S):

KIND

PCT Int. Appl., 30 pp. SOURCE:

CODEN: PIXXD2

DATE

DOCUMENT TYPE: Patent Japanese LANGUAGE:

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.

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WO	WO 2004022732					A1 20040318			WO 2003-JP10540					20030820				
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		CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	ES,	FI,	GB,	GD,	GE,	GH,	
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		PG,	PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SY,	TJ,	TM,	TN,	
		TR,	TT,	TZ,	UA,	ŪĠ,	US,	UŻ,	VC,	VN,	YU,	ZA,	ZM,	zw				
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EP	EP 1535997				A1 20050601			EP 2003-794088						20030820				
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		ΙE,	SI,	LT,	LV,	FI,	RO,	MK,	CY,	AL,	TR,	ВG,	CZ,	EE,	ΗU,	SK		
CN	CN 1751119					A 20060322 CN 2003-824734							20030820					
						A1 20060504 US 2005-526026												
PRIORIT	IORITY APPLN. INFO.:					JP 2002-253742							A 20020830					
										WO 2	003-	JP10	540	,	W 2	0030	320	
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ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN L2A method of purifying a target protein from a solution, in which AB the target protein containing an electron transfer protein is dissolved, with the use of liquid chromatog. The liquid chromatog. is performed by introducing the above-described protein solution into a tank filled with a packing agent, thus bonding the target protein to the packing agent, removing impurities, and then eluting the target protein from the packing agent with the use of an eluent containing a hydroxycholanoic acid salt. The liquid chromatog. is performed by combining hydrophobic chromatog. with anion exchange chromatog. Glucose dehydrogenase was purified from the Pseudomonas putida culture by hydrophobic chromatog. and anion exchange chromatog., using sodium cholate as eluent. Toyopearl QAE 550 (quaternary ammonium) was used as anion exchanger.